

Amendments to the Claims

This listing of claims will replace all prior versions, and listings of claims in the application.

Listing of Claims:

Claims 1-24 (Canceled).

25. (Previously presented) A lower electrode of a capacitor, comprising:
a first layer in the form of a plate comprising a material that serves as a barrier against the diffusion of impurities from a lower substrate;
a second layer formed over the first layer, the second layer comprising a material that is easy to pattern; and
a third layer formed over top and side surfaces of the second layer and side surfaces of the first layer, the third layer comprising a material having low leakage current properties;
wherein the lower substrate exposed by third layer is over etched to form a step in an upper surface of the lower substrate.

26. (Original) A lower electrode of a capacitor according to claim 25, wherein the first layer comprises TiN.

27. (Original) A lower electrode of a capacitor according to claim 25, wherein the second layer comprises RuO₂.

28. (Original) A lower electrode of a capacitor according to claim 26, wherein the third layer comprises Pt.

29. (Canceled)

30. (Previously presented) A semiconductor device, comprising:
an insulating film formed over a semiconductor substrate;
a conductive plug formed in the insulating film;

a first layer formed over the conductive plug and the insulating film, the first layer comprising a material that serves as a barrier against the diffusion of impurities from the conductive plug and the semiconductor substrate;

a second layer formed over the first layer, the second layer comprising a material that is easy to pattern; and

a third layer formed over top and side surfaces of the second layer and side surfaces of the first layer, the third layer comprising a material having low leakage current properties;

wherein the insulating film exposed by the third layer is over etched to form a step in an upper surface of the lower substrate.

31. (Previously presented) A semiconductor device according to claim 30, wherein the first layer comprises TiN.

32. (Previously presented) A semiconductor device according to claim 30, wherein the second layer comprises RuO₂.

33. (Previously presented) A semiconductor device according to claim 30, wherein the third layer comprises Pt.

34. (Previously presented) A semiconductor device according to claim 30, wherein the conductive plug comprises polysilicon.

35. (Canceled)

36. (Previously presented) A capacitor adapted for use in a semiconductor device, comprising:

a first layer in the form of a plate comprising a material that serves as a barrier against the diffusion of impurities from a lower substrate;

a second layer disposed on a top surface of the first layer, such that side surfaces of the first layer remain exposed, the second layer comprising a material that is easy to pattern; and

a third layer disposed on top and side surfaces of the second layer and on the exposed side surfaces of the first layer, the third layer comprising a material having low leakage current properties.

37. (Previously presented) The capacitor of claim 36, wherein the lower substrate exposed by the third layer is overetched.

38. (Previously presented) The capacitor of claim 36, wherein the first layer comprises TiN.

39. (Previously presented) The capacitor of claim 36, wherein the second layer comprises RuO₂.

40. (Previously presented) The capacitor of claim 36, wherein the third layer comprises Pt.

41. (Previously presented) A semiconductor device, comprising:
an insulating film disposed on a semiconductor substrate;
a conductive plug disposed in the insulating film;
a first layer disposed on the conductive plug and the insulating film, the first layer comprising a material that serves as a barrier against the diffusion of impurities from the conductive plug and the semiconductor substrate;

a second layer disposed on a top surface of the first layer, such that side surfaces of the first layer remain exposed, the second layer comprising a material that is easy to pattern; and

a third layer disposed on top and side surfaces of the second layer and on the exposed side surfaces of the first layer, the third layer comprising a material having low leakage current properties.

42. (Previously presented) The capacitor of claim 41, wherein the insulating film exposed by the third layer is overetched.

43. (Previously presented) The capacitor of claim 41, wherein the first layer comprises TiN.

44. (Previously presented) The capacitor of claim 41, wherein the second layer comprises RuO₂.

45. (Previously presented) The capacitor of claim 41, wherein the third layer comprises Pt.